



The GARzette



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The Official Newsletter of the Gwinnett Amateur Radio Society

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www.GARS.org



TechFest

**GARS January Exhibition of the
Technical aspects of Amateur Radio
held at the [Gwinnett County
Fairgrounds](#)**

**Don't forget to support our
advertisers at the back of the
GARzette.**

GARS Meeting: WinLink email via Amateur Radio by Mark Bell N7GRB

Tuesday July 12, 2022 at 7:00 PM

President's Message

From the President...

Another **Field Day** is behind us and many things happened with this. I'm sure we will see great results once they are ready to be published. I know we hit a lot of Bonus points thanks to folks going around with a checklist and folks stepping up to perform those specialties that earned Field Day Bonus points. Many thanks to our Field Day Chairman David Adcock, KA4KKF for his tireless effort in seeing every facet gets completed.

Not only is Field Day an exercise (or contest), it is a testament to all of the GARS individuals who just get-to-work and do what needs to be done. It takes a lot to setup and assemble all the stations, antennas, tents, food, banners, etc., but everything gets done, and get done pretty efficiently. I thank everyone involved this years GARS Field Day 2022!

Coming up - from what I see, the **HamCram** for the General class license is filling up, so if you are looking to make that upgrade, you had better sign up now. Also, we will be holding another 'Show-n-Tell' in a few months. So, get that Amateur Radio project completed and come show it off to the membership. No project is too big or too small to display and show us your skills and creativity.

While checking the GARS post office box, we discovered a wonderful surprise.



A couple of months ago, Brian Page, N4TRB and I, helped another Ham and GARS Family Member, Vinnie Bazain, KA4WAY with his antenna and tower. Vinnie was very grateful and thanked Brian and I many times in person and emails. Now Vinnie has expressed his gratitude even further by sending GARS an appreciation plaque. Brian and I got an appreciation plaque as well. Shown, is the one for GARS.

When helping each other, we not only perform a wonderful thing for that someone, we perform a wonderful thing for ourselves as well by receiving the satisfaction of giving. When a call comes in for a little assistance, please consider answering that call and give someone a helping hand. You may not get a nice plaque or trophy for your effort, but a pat on the back from a fellow ham can feel just as warm and rewarding.



73,

Joe Biddle, AD4PZ

Club President

ARRL / GARS Supported Scholarship Winners

The ARRL just posted the list of scholarship winners for 2022.

The Gwinnett Amateur Radio Society Scholarship, \$1,000

Alexandra Kemp, WD4BDQ, of Alpharetta, Georgia

Also notable - **Ruth Willet, KM4LAO** won another scholarship. Ruth will be attending Graduate School at Pennsylvania State University, in pursuit of a Master of Science degree in Acoustics.



The

GARS Repeaters and Other Communications

<u>2 Meter Repeaters</u> 147.075(+) MHz Tone 82.5 147.255(+) MHz Tone 107.2 <u>1.25 Meter Repeater</u> 224.580(-) MHz Tone 100.0, 1.6 MHz Offset <u>70 Cm Repeaters</u> 444.525(+) MHz Tone 82.5 442.100(+) MHz Tone 100 442.325(+) MHz Tone 100	<u>6 Meter Repeater</u> 53.110 (-1 MHz) No Tone (Offline for Maintenance) Other Resources: <u>APRS</u> 144.390 -- 1200 Baud W4GR <u>D-STAR</u> WD4STR 145.060 + (1.4 MHz) 440.550 + (5 MHz)	6M Currently down 147.075 Operational in Snellville 147.255 Operational in Snellville 224.580 Operational in Grayson 442.100 Operational at Goshen Springs 442.325 Operational in Buford 444.525 Operational in Snellville Link remote receivers being added
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Notable Web Links

Ham Radio Glossary: <https://noji.com/hamradio/glossary.php> a very comprehensive listing provided by Noji Ratzlaff KNØJL. On his site there is also a lot of information about getting started in ham radio.

Need Help – Let GARS Elmers answer your questions

Send an email to elmers@gars.org with the subject listing the area (like Antennas, Repeaters, Digital, DMR etc.) of your query to get to GARS Elmer volunteers.

The *GARzette* is the official monthly newsletter of the Gwinnett Amateur Radio Society, serving its members and other persons interested in the advancement of the Amateur Radio art.

Original articles, art, and photos are invited and encouraged. Previously copyrighted submissions cannot be accepted for reprinting unless permission from the appropriate publisher is provided in writing along with the information being submitted. If reprints are from publications allowing their unrestricted use, please include a copy of the printed permission contained in the publication.

If possible, bring your articles to the monthly meeting in Microsoft Word or rich text (.rtf) or text or HTML format or by e-mail to editor@gars.org. Artwork can be accepted in most any graphics format and can be submitted via e-mail to the same address. Alternate means of submittal can be arranged when necessary.

In keeping with the Amateur Radio spirit, permission is hereby granted for the reproduction of The *GARzette* articles by other Amateur Radio club newsletters provided that proper credit is given to the individual author and *The GARzette*.

The GARzette is published each month with the assistance of Karen KI4HPP and Kyle W4KDA who print copies for distribution at meetings, etc. and Dave Bruse, W4DTR, who distributes the newsletter electronically.

Deadline for submissions is the 28th of each month for inclusion in the following month's issue.

For additional information view our Website at: <http://www.gars.org>

Newsletter Email: editor@gars.org Editor: Bob Hoffmann, K4CQO Assistant Editor: Bill Eggers, WB2RIS

GARS HELP WANTED

Speakers Needed for GARS Workshop Presentations, 3rd Tuesday of the month – Email workshop@gars.org to volunteer. [PS— Articles to publish in the *GARzette*, either written by GARS members or published elsewhere, are always welcome. —Ed.]

GARS Meetings & Workshops

GARS Meetings and Workshops are held in-person at the EAA 690 Hangar, 690 Airport Rd, Lawrenceville, GA 30046.

Meetings and Workshops are OPEN to all, feel free to share your invite with others.

Zoom login info will be posted to <http://www.gars.org> prior to the meeting.

When events are available on Zoom

- Workshops and Meetings will be **recorded**. By participating you consent to being **recorded**.
- Please change your display name to Your **FirstName Call Sign**, e.g. **Hiram W1AW**
- [How to change Your Display Name in Zoom](#)
- Please stay muted until ready to speak. Your space bar works like a PTT for un-muting
- To be fair to everyone, there will be a three minute limit for each person during Q & A
- You may ask questions in chat; **please stay on topic while using chat.**

GARS Meetings Schedule (second Tuesday @ 7:00 PM): (these are the presentations)

- July 12, 2022 – WinLink email via Amateur Radio - Mark Bell N7GRB
- August 9, 2022 - How to build a 4-element, 2m, Cubical Quad Antenna - Dallas N4DDM
- September 13, 2022 - Favorite Ham Radio and Related Websites
- October 11, 2022 - GARS Show-n-Tell - The Hand-on Workshop
- November 8, 2022 – Pi-Star DMR Hot Spot - Mark Prichard KN2TOD
- December - GARS Holiday Party

Workshop Schedule (third Tuesday @ 7:00 PM): (these are the Hand-on Workshops)

- July 19, 2022 – WinLink email via Amateur Radio - Mark Bell N7GRB
- August 16, 2022 - How to build a 4-element, 2m, Cubical Quad Antenna - Dallas N4DDM
- September 20, 2022 - Favorite Ham Radio and Related Websites
- October 18, 2022 - GARS Show-n-Tell - The Hand-on Workshop
- November 15, 2022 – Pi-Star DMR Hot Spot - Mark Prichard KN2TOD
- December - GARS Holiday Party

GARS Meeting – July 12, 2022

WinLink email via Amateur Radio - Mark Bell N7GRB



Mark Bell N7GRB was recently appointed as our **ARRL Technical Specialist** for his work and devotion in training

ARES members throughout Georgia in the use of WinLink as the primary Emergency Communications platform. However, Winlink goes beyond emergency communications and is use by many hams when they are beyond the reach of a typical Internet connection such as; Maritime Mobile, Camping/RVing, or whenever the lights go out in Georgia. Mark will get into what equipment and software is needed.

GARS Workshop – July 19, 2022

WinLink email via Amateur Radio - Mark Bell N7GRB

Mark will help install and configure WinLink and we will send a few practice messages via Telnet (using the internet).

This will be an in-person Workshop at the EAA 690 Hangar.

GARS Happenings

20 Years ago in the July 2002 GARzette:

- John Davis, WB4QDX joined GARS 20 years ago and took on the Membership Chairmanship
- The county commission declared and presented to GARS an Amateur Radio Week Proclamation
- The 2002 Field Day article with pictures and a 50' crank up antenna was featured
- Interesting "FIELD DAY X FILES" article mentioning lightning and St. Elmo's Fire happenings

You can always browse the GARzette archive at <http://www.gars.org/newsletters> and go directly to the 2002 GARzette by clicking on the image. 73, Bob, K4CQO, GARzette Editor



Health and Wellbeing – Sandy Jackson, KJ4DRO

Look for this resource on gars.org and use it as a means to convey information about a GARS family member or Silent Key notification.

Net Managers Corner

Monday Night 2 Meter "Want, Swap, Sell, and Information Net"

GARS NEEDS MEMBERS TO SERVE AS NET CONTROL STATIONS!

GARS is a great Amateur Radio service club with the membership and awards to prove it. Our club is very busy and active, and we use the Monday night net to get timely information out to our members. Weekly participation is needed to make our net function well. There is only a small group of very dedicated people who make the net happen each week, and we need more members to volunteer to serve as Net Control Stations (NCS) on a rotating basis.

Out of almost 300 members, there are only seven operators who serve as the NCS for the GARS net every Monday night. In no particular order, they are:

Don – KW4AL	Ray – N4GYN	Bill – WG9NUW	David – KA4KKF
Glen – W3WWT	Russell – AB4QQ	Chuck – KK4TKJ	Charlie – WS4TOT

As GARS Net Manager (Chuck KK4TKJ), I would like to have more volunteers to fill NCS positions. I do plan and post the schedule months in advance. Any conditions will be accommodated that you as a rotating NCS need to place on the scheduling of your duties. If your plans change, I can make adjustments for the schedule to work, and I will make those changes happen as soon as I am notified of a problem. As Net Manager, I also send out reminders each week to let the NCS scheduled know he or she is NCS for the next Monday night net. In short, serving as a rotating NCS is a small duty but a great contribution to the club. The "Want, Swap, Sell Information Net" begins promptly at 19:30 every Monday night and runs about 30 minutes. As a scheduled NCS, you will request the assistance of a volunteer alternate NCS each time you have Net Control. Your simple duties will be to tune in to the GARS repeater, read the script, take a few notes and forward the information to me for record keeping.

Please lend a hand and contact me (Chuck) at KK4TKJ@arrl.net. Sign up to help support the effort that makes GARS the great club that it is. 73 and see you on the Nets!

General HamCram July 30 and 31

GARS GENERAL LICENSE HAMCRAM CLASS



WHEN: Saturday 7/30/2022 and Sunday 7/31/2022; 8:00am to 4:00pm each day, exams start at 4:00pm Sunday.

WHERE: EAA 690 Hangar, Gwinnett County Airport – Briscoe Field, [690 Airport Rd., Lawrenceville, GA 30046](#)

MORE INFO: To register for our 2-day General License HamCram Class, use our registration form in the left column. Pre-registration is REQUIRED. No Walk-ins accepted. This fee is non-refundable. Our \$25 fee covers the class and lunch both days, and the exam fee for the exam given Sunday at 4:00pm. Lunch will be brought in to save time.

We will be using the [Ham Radio School General License Study Guide](#) for this class. You can purchase the study guide locally at Ham Radio Outlet in Doraville, or purchase the book online at HamRadioSchool.com. We encourage you to at least look over the material in a study book and take some practice tests. We will go over every question in the General class question pool during the class, but remember that the test will only be 35 multiple choice questions. If you get 26 out of the 35 questions correct, you will pass the test. We suggest that you take some practice tests prior to the class to familiarize yourself with the question format and some of the material. Go to [our exam page for sample online tests towards the bottom](#) on GARS.org.

QUESTIONS: Questions about the class or the exam session — [click here](#) to email the instructors.

What Happens to GARS Meeting Raffles

At a recent GARS meeting, I was the lucky winner of a door prize: a lovely and very sturdy hand-made GARS tote bag! No sooner had I returned home from the meeting and plopped the bag down for a moment than one of my cats just had to investigate ... and give it a test run: (G)atos (A)rea (R)etention (S)ystem!



I've brought it to every GARS meeting since and Joe (AD4PZ) remarks what a lovely bag it is! Little does he know all the hours Tiffany (the calico cat) has spent checking it out! Fits her like a paw and meets all retention specs purr-fectly.

by Mark Prichard, KN2TOD

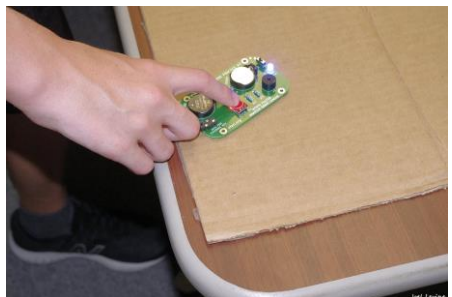
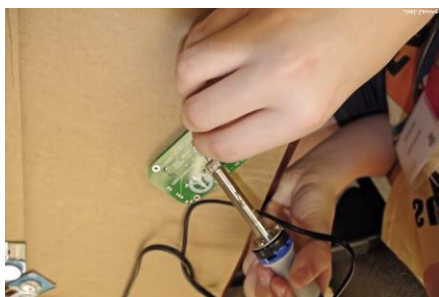
GARS Helping 2022 Aviation Summer Camp

On behalf of Louis Pucci, Chapter President, Gay Roberts, EAA Summer Camp Director and all those who participated in the 2022 Aviation Summer Camp I would like to thank those GARS members who helped make it another success. 2022 was the 10th year for the summer camp and the second year we used the Code Practice Oscillators supplied by NFARL to teach the art of soldering.

This year we had 12 kids in the Alpha Group who participated and as you can see from the photo's they all learned enough to complete the boards with just a few minor hot fingers. All but one CPO worked with minor touch-up.

Following the soldering session an attempt was made to demonstrate ham radio and talk a bit about GARS and Ham Radio. Unfortunately, on Friday morning the bands were largely closed although some weak CW was heard with the limited equipment. Next year will be better!

An especial thanks to GARS members (in alpha order); Paul Branson, Paul Kelley, Ralph Pickwick, Joel Levine, Mike Weathers, Earl Whatley and Randy Woolery.



GARS Field Day



Excerpts from **Kevin K4GTR**, **David KA4KKF**, **Bob K4CQO**

Another great field day is in the books. I wanted to thank David for another well-organized job well done. I also wanted to personally thank all of those who helped David pull this off. What a great team GARS members are and I am proud to be in this group.

Thanks to the band captains, visitor hosts, whoever bought and brought the food, drinks, etc., and I cannot forget the ice cream!!!

Everyone pitched in to get set up and there were plenty of volunteers helping wherever they could. Everything was ready with time to spare. I was also impressed that so many people stuck around to the very end to make sure that everything was all packed and cleaned up without bugging out early. This is a great group and I am happy to be on this winning team.

We had a lot of youth, younger hams and visitors show up and that was great to see. They are the future of amateur radio and this club.

Even though I did not operate any stations this time around it was because I was having eyeball QSOs when the work was done. I didn't really have a desire to operate this time around but mingle instead.

It was a great time to meet new club members, revisit older club members and just get re-acquainted with many friends. That is also a big part of the ham community and I saw a lot of other eyeball QSOs happening, too. Looking forward to the next GARS event.

There are so many people that make this job look easy.

Everyone who came out to help setup and take down the antennas and the tables, the food prep, the network, the receive antenna, transport equipment from storage and ARES trailer, who brought gas and water, drinks, and ice.

The people who came out to operate, the people who worked the hospitality table. There were so many people that pitched in to make it a great field day.

I want to give congratulations to the band captains, who brought Their equipment out for people to use.

- Ares- 20 ssb
- K4KLY Paul cw station
- AF4FG Earl 15 ssb
- W4LON Fisher 20 digital
- N4DDM Dallas 40 ssb
- WB4QDX John 40 digital
- KX4HA Jamie 15/80 digital
- KA4KKF David 75/10 ssb

GARS also had a table set aside providing DMR information. It was maned by Bob, K4CQO and Mark, KN2TOD along with Dave, K8WDJ. It put on display what can be done with DMR – a phone communication method that has the clear voice that digital communication provides. There were 2 HTs, one connected to Georgia State (TG 3113) and another connected to World Wide (TG 91). Both HTs were connected to a duplex hotspot using a cellphone's internet connection.



While there were few takers to use the HTs, both had clear voice traffic showing users from within Georgia and many from around the world. Some of the notable things:

- Georgia has a 10k Peachtree Road Race on July 4th. The road race uses amateur radio for communication and uses DMR as part of the communication. We helped setup an HT for DMR connection to repeaters and in simplex mode (HT to HT) so it can be used during the ham radio support of the race.
- Provided what a hotspot includes – Raspberry Pi & MMDVM – including what to look for in getting one and how using one differs for connecting to a repeater supporting DMR.
- Let new ham licensees understand what DMR can offer to them
- Meet with Gwinnett Commissioner Marlene Fosque



At the GARS Field Day we had a few individuals successfully completed their First Contact and was subsequently awarded a certificate for such.

- Isitha Thanthiriwatte, KQ4BKD
- Olivia Mc Mahon, KO4UIB
- Unlicensed:
- Kanchana Thanthiriwatte, KQ4BKE
- Bradley Guerrero, KQ4BGK
- Emma & Collette

Pictured here is Hope, KO4PVM (left) and Ruth KM4LAO (right) helping Olivia KO4UIB with her first contact.





The

GARzette

Here are the Field Day stats:

CW contacts for - KM4LAO = 272	PH contacts for - WB8ICQ = 54	ALL contacts for - KM4LAO = 400	ALL contacts for - WB4WTN = 9
CW contacts for - WB8ICQ = 61	PH contacts for - AK4AM = 44	ALL contacts for - KX4HA = 203	ALL contacts for - WD4JEM = 5
CW contacts for - W4KLY = 13	PH contacts for - KJ4CNC = 43	ALL contacts for - W7ALS = 151	ALL contacts for - KO4ZDH = 4
CW contacts for - ND4V = 13	PH contacts for - W4GOP = 30	ALL contacts for - N4DDM = 133	ALL contacts for - KO4PVM = 3
-----	PH contacts for - KO4QBC = 17	ALL contacts for - W4LON = 125	ALL contacts for - KQ4BKE = 2
DIG contacts for - KX4HA = 203	PH contacts for - AF4FG = 15	ALL contacts for - KJ4CNC = 123	ALL contacts for - KQ4BGK = 2
DIG contacts for - W4LON = 125	PH contacts for - WB4WTN = 9	ALL contacts for - WB8ICQ = 115	ALL contacts for - KC4OBY = 2
DIG contacts for - WB4QDX = 94	PH contacts for - WD4JEM = 5	ALL contacts for - KN4WBS = 103	ALL contacts for - KQ4BKD = 1
DIG contacts for - KJ4CNC = 80	PH contacts for - KA4KKF = 5	ALL contacts for - WB4QDX = 94	ALL contacts for - KO4UIB = 1
DIG contacts for - KA4KKF = 68	PH contacts for - KO4ZDH = 4	ALL contacts for - KA4KKF = 73	ALL contacts for - DDM = 1
DIG contacts for - KO4QBC = 32	PH contacts for - KO4PVM = 3	ALL contacts for - KO4QBC = 49	=====
DIG contacts for - KJ4CAT = 25	PH contacts for - KQ4BKE = 2	ALL contacts for - AK4AM = 44	Total contacts = 1739
-----	PH contacts for - KQ4BGK = 2	ALL contacts for - W4GOP = 30	- CW contacts = 359
PH contacts for - W7ALS = 151	PH contacts for - KC4OBY = 2	ALL contacts for - KJ4CAT = 25	- DIG contacts = 627
PH contacts for - N4DDM = 133	PH contacts for - KQ4BKD = 1	ALL contacts for - AF4FG = 15	- PH contacts = 753
PH contacts for - KM4LAO = 128	PH contacts for - KO4UIB = 1	ALL contacts for - W4KLY = 13	= ALL contacts = 1739
PH contacts for - KN4WBS = 103	PH contacts for - DDM = 1	ALL contacts for - ND4V = 13	

Call Used: W4GR; GOTA Station Call: (NONE); ARRL/RAC Section: GA; Class: 8A

Participants: 85; Club/Group Name: Gwinnett ARS

Power Source(s): Generator, Battery, Solar; Power Multiplier: 2X

Preliminary Total Score: 7,282

Bonus Points:

100% emergency power	800
Public location	100
Public information table	100 - Documented by public info.jpg
Formal message to ARRL SM/SEC	100 - Documented by sm-sec-message.pdf
Natural power QSOs completed	100 - Documented by solar-contacts.txt
Site visit by invited elected official	100
Educational activity	100
Youth participation (4 x 20, max of 100)	80
Safety officer	100 - Documented by SAFETY.jpg
Social media	100
Satellite QSO	100
Entry submitted via web	50
Total bonus points	1,830

Score Summary: (Cabrillo log/dupe sheet file: W4GR.dup)

	CW	Digital	Phone	Total
Total QSOs	359	627	754	
Total Points	718	1254	754	2726 Claimed Score = (QSO points x power mult) = 5,452

Band/Mode QSO Breakdown:

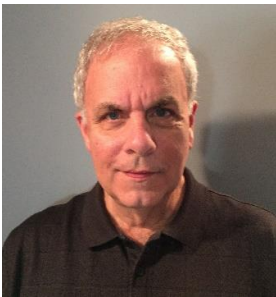
	CW		Digital		Phone	
	QSOs	Pwr(W)	QSOs	Pwr(W)	QSOs	Pwr(W)
80m			101	50	95	100
40m	279	100	202	50	396	100
20m	80	100	128	50	153	100
15m			195	50	95	100
10m					14	100
6m			1	50		
Satellite					1	5
TOTAL	359		627		754	

Submitted by: David Adcock, KA4KKF ka4kkf@gmail.com

Johnson Viking Valiant

Vintage Amateur Radio

de Bill Shadid, W9MXQ



This month's article was scheduled to be Part 4 of my series on the Drake TR7 / TR5 / TR8 Transceivers. However, due to some copyright issues on some of the material, I am moving that article out a month, at least. Meanwhile, I want to talk a bit about a new item in the W9MXQ Radio Collection. That would be a meticulously restored Johnson Viking Valiant Transmitter. The Viking Valiant plays an important part in my ham radio history. I never held a Novice license – I started as a General – so the VFO equipped, high powered Johnson Viking Valiant was my first ham radio transmitter.

This installment documents my experience with several Valiant transmitters in my ham radio lifetime. It was not only my first transmitter used on the bands, right now it is also my most recent addition to my collection. Now, however we need to go back to 1964 for my first Valiant:



Johnson Viking Valiant 160-10 Meter CW/AM Transmitter

**Similar to one Purchased Used/Reconditioned from
Amateur Electronic Supply, Milwaukee, Wisconsin in 1964
(Very nice condition – but only about five years old at the time.)**

One of my best friends – in those days, and still today, is Gary Frankeberger, WA9BJU. At that time, we both lived in Normal, Illinois – being friends and school mates starting in the fifth grade. We got interested in ham radio about the same time, but Gary received his license about two and a half years before it was my turn – model railroading, at that time, was ruling my life. When my license, WA9MXQ, came along in 1964, Gary was using a Valiant for his transmitter with a Hammarlund HQ-100 Receiver and Gotham Vertical Antenna. (Do any of you remember the Gotham Vertical?) After several overnight operating sessions at Gary's shack, running the Valiant, I decided it was also the transmitter for me. I bought a used Valiant from Amateur Electronic Supply, in Milwaukee, and a used Hallicrafters SX-101 Mark III Receiver from Klaus Radio in Peoria, Illinois. At the same time, I bought my first antenna, a HyGain 14-AVQ Vertical – also coming from Klaus Radio. My first contact was with a station, on 40-meter CW, only blocks away. But to me, it was real DX. DX, after that, was defined a bit further away – but, we all remember that moment when we first knew – it works!!

The Valiant was a superb radio for CW and AM. It ran 275 watts input on CW with a bit over 200 watts output. And, it ran 200 watts input of plate modulated AM with a 150-watt output. If you calculate that at about 75% efficiency, you are correct. The transmitter ran Class C Amplification – the final was not a linear amplifier. Those of you that do not understand the difference have perhaps a bit of reading to do. The Valiant had the ability to switch its final amplifier to Class AB1 to allow for the insertion of a low

power (2 to 5 watts) of excitation from an SSB Exciter to allow for 275 watts PEP input (for an output in Class AB1 of about 130 watts). Exciters like the Central Electronics 10A, 10B, or 20A were widely used with the Valiant for such purposes. In that kind of operation, only the driver and final amplifier section of the Valiant were utilized. The Valiant would be set to the proper band with the lower stages disabled.

The Valiant used three 6146 tubes in the final amplifier that were modulated by two more 6146 tubes in the plate modulation circuit. The modulator had the ability to produce more than 125 watts of audio. At 200 watts of RF input there would have been a requirement of 100 watts, or more, of audio. The radio was no light-weight design. It was constructed of steel, painted like an automobile (I used to wax my Valiant!), and was massive at 21 x 11-5/8 x 16-1/4 inches (WHD) and with a shipping weight of 83 pounds. One of its many talents was to hold down the operating desk in a windstorm!! Mind you, the Hallicrafters SX-101 I was using at the time was no lightweight either – it was 20 x 10-1/2 x 16 inches (WHD) and weighed in at 74 pounds, shipping weight.

I continued with my Valiant into 1965 and added the Viking SSB Adapter to the operation that year. The SSB Adapter was different than the idea of an outboard exciter, it used the VFO and lower level stages in the Valiant. But the Valiant had to be modified with a special kit to allow such operation. Here is a picture of the SSB Adapter, taken from the 1965 Johnson Amateur Products Catalog:



The Viking SSB Adapter matched, and was plug and play with, the later Valiant II Transmitter. However, the original Valiant could be modified to accept the Adapter. This modification made the Valiant (by then referred to as the Valiant I) the electrical equivalent to the Valiant II.

The modification was extensive. It involved adding connectors to the back panel and required numerous internal alterations and connections. I was pleased with the results. When finished, it worked perfectly and the SSB Adapter and the Valiant came to life on SSB. Tuning the pair was a nightmare compared to what we experience today.

If there was ever a shortcoming with me and equipment it was my desire to have pieces from a manufacturer match each other. The Valiant and the SSB Adapter did not match each other. In my mind, that was a problem. (In reality, it made no difference – a point that never held much water in my thought process.)

To slake that thirst for matching equipment, in 1966, I sold the Valiant and bought a brand-new Johnson Viking Valiant II – in kit form – again from Amateur Electronic Supply. My AES salesman then, as he is now at Ham Radio Outlet, was Paul Szczerbinski, K9KHO. I remember waiting what seemed like an eternity for the kit to arrive from Milwaukee, via Railway Express. In kit form, the box approached 100 pounds and I can still remember the Railway Express agent wheeling up to my parent's house. Those days were well before the instant gratification, one or two day (order to delivery), of our Amazon crazed world.

Doing the modification on the original Valiant to use the SSB Adapter had prepared me for the kit approach from Johnson. So, the complexity of the Valiant II kit was no surprise. Believe me when I say that Johnson was certainly not Heathkit. The kit took many hours, a lot of thinking, a lot of learning, and was very satisfying to complete. When done, however, it did not work!! But, in short order, retracing my footsteps I found the problem to be an incorrectly wired terminal strip. I had wired one side correctly (pins 1 through 8 on one side were wired 8 through 1 on the other side). It was a wonder I did not blow up the radio!! Over the years, I have found several other hams who assembled the kit and made the same error. Here is the Valiant II as shown in the 1965 Johnson catalog:



Johnson Viking Valiant II 160-10 Meter CW/AM Transmitter From the 1965 E. F. Johnson Amateur Equipment Catalog

By that time, the original SX-101 Mark III Receiver was gone from the shack. It was replaced by a Hammarlund HQ-170AC Receiver⁴. A three-element triband HyGain TH-3 beam had been added on a 50-foot tower. But, alas, that all ended in late 1966 when Jean (my XYL) and I got married and moved into an apartment. The Valiant II, the SSB Adapter, and the HQ-170AC quickly morphed into a tiny Sideband Engineers SB-34 Transceiver. The tower and beam came down and were replaced by an end fed wire and home brew antenna tuner.

Many pieces of gear have come and gone since then – along with the development of my radio collection. But the fun that I had with the Valiant was not to be forgotten.

Back in June of 2017, another very nice Valiant come into the shack by way of Pat Volkmann, W9JI, in the form of a trade. I guess I was not ready to tackle that beast at the time, and about a year later it went back to Pat in yet another trade.



This is the Johnson Viking Valiant from W9JI. My intention at the time was to fully restore it. I have been thinking of late that I would like to attempt that again. Many of the big CW/AM Transmitters from the 1950's and 1960's are open and accessible in most areas. A significant exception to that statement are the 32V series transmitters from Collins. A nightmare!

Very recently I had the opportunity to secure yet another Valiant – and this time I hope that I am smart enough to keep it in the collection as long as I can keep radios here. This is an original Valiant (not a Valiant II) and has been restored to original condition – it appears to have come off the assembly line just today. Here it is:

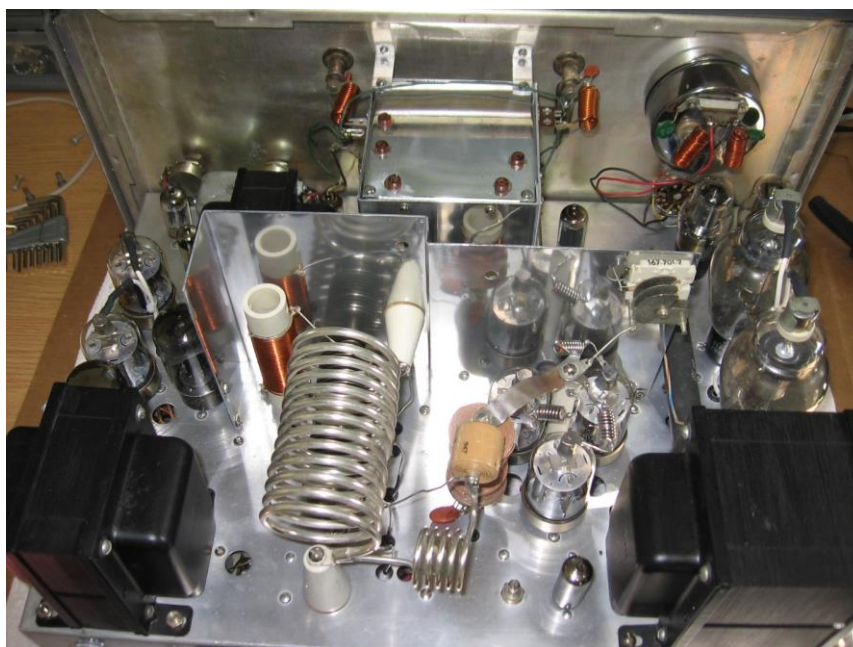


Fully Restored

Johnson Viking Valiant 160-10 Meter CW/AM Transmitter
Sitting in the shack at W9MXQ in August of 2019
(If you see a mark on this radio it IS a refection!)

This fine example was meticulously restored by one or both well-known restorers, Howard Mills, W3HM, and/or Chuck Hurley, K1TLI¹. Both of their names appear on documentation and packing of this radio. It currently does not work, due to an issue caused by the shipper in getting it to Milwaukee. It is certainly repairable, and it will soon be on the air.

All Valiant and Valiant II Transmitters are essentially the same – with only cabinetry and the SSB Adapter circuitry changing over a long span of production². Here is an internal picture, provided on-line by Chuck Hurley, K1TLI. It is identical to the interior of the recently acquired Valiant at W9MXQ:



Interior View – Johnson Viking Valiant Transmitter

Looking toward the interior side of the Front Panel, from the rear. To the left are the two 6146

Modulators. Just left of rear center is the Tank Coil in the Pi-Network Output Circuit. To the right of the coil are the three 6146 Final Amplifier tubes. To their right is the HV Power Transformer. To the right center are the two 866A Mercury Vapor Rectifier Tubes. Those rectifiers glow in “electric blue” flashes as CW is sent. At the lower left is the Power Transformer for filament, bias, and low high-voltage requirements of the radio. The power supply chokes are under the chassis.

This radio came to W9MXQ in a radio trade with John Schroeder, KB9PBM, a fellow member of the Wisconsin Amateur Radio Club. John is a fellow appreciator of vintage radios.

As a final item, I want to share with you a story about the first Valiant. That was the one mentioned first in this article, from 1964. As a collector, I always wonder what happened to radios that are no longer in my collection. Some come back! But many are gone like a lost family member or friend and I wonder what became of them. I had especially wondered about this one since it was my first transmitter. But, in a lucky break, I received this message from Italian ham operator, Roberto Lucarini, IKØOKT:

Hi William,

I found the callsign WA9MXQ written on the frame of this Johnson Valiant, here you see that before the restoration.

It was by chance really yours?

If so, from United States it's arrived in Germany and later in Italy ...

Greetings from Rome.....

Roberto, IKØOKT

Wow, what a great piece of news!! Back in those days, I would scratch my name³ into the chassis of radios I had owned. Here is how that appeared to Roberto:



**This may be hard to see,
but here is the “hen scratching”
showing “WA9MXQ.”
(My call until only a few years ago.)**

Roberto found the Valiant in Germany and had it shipped to his QTH, in Rome. The radio was inoperative, and it was not known at that time if it could be restored to full operation. Its story – how it traveled from the USA to Germany – is still unknown.

Picture details of my once beautiful, 1964 edition Valiant, as Roberto received it, are shown, below. It is evident that the transmitter had been dropped on its left side (when viewed from the front). The inertia of the two power transformers and the tank coil is evident in the overall picture. The close-up picture of just the lower voltage power transformer shows even more detail. If either of these transformers had

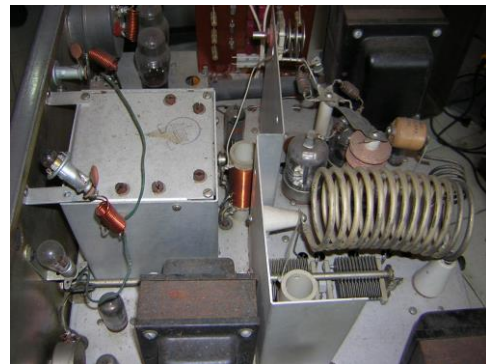
broken away from their mounts the interior damage could have been much worse. The integrity retained by the chassis is a tribute to Johnson's all steel construction:



Views showing that the transmitter had been dropped (close-up detail at the right).



Front of Transmitter – Note thermometer!



Interior view – See distorted tank coil.

Now, here is the same Valiant as restored by Roberto:



Cleaned up Chassis and Completed Transmitter

And, my old Valiant in Roberto's ham station: (Also see the IKØOKT QRZ page.)

The before and after pictures of the Valiant (above and below) are a tribute to Roberto's restoration ability. It appears, but is not confirmed, that Roberto returned the very visual 866A Mercury Vapor Rectifiers to their rightful place in the Valiant.



IKØOKT Shack – Left to Right

Johnson Viking 500, Drake R-4B Receiver on top of Drake MN-2000 Antenna Tuner, Johnson Ranger on top of National HRO-60 Receiver, and.... the Johnson Valiant (ex-W9MXQ Valiant) at the very right side.

(A somewhat newer picture appears on IKØOKT's QRZ page, today.)

A special thanks go to Bob, W9DYQ, for his proof reading of my articles. Remember that I am open to questions and comments at my email address, W9MXQ@TWC.com.

Reference Notes:

1. I am in the process of sorting out the involvement of Howard Mills and/or Chuck Hurley in this radio. I have a work sheet of what was done to the radio as provided by Hurley. But the appearance of Howard Mill's call letters on the packing leads me to believe that there was some cooperative effort involved. Howard Mills is best known for his Collins Restorations with a good reputation for some Johnson equipment. Chuck Hurley owns a Score Board Sign Company. He also restores collectable automobiles – in addition to his exclusive Johnson restorations of Rangers, Valiants, Pacemakers, 500s, Couriers, Thunderbolts, Challengers, and Matchboxes.
2. There is another difference in the Valiant and the Valiant II that is a real surprise when moving from the original to the "II" model. Just to the right of the FINAL control on the front panel, immediately to the right of the VFO knob, is the DRIVE control. That control was on the front panel, just outside the chassis mounted 6AL5 Dual Diode, Audio Clipper Circuit Tube, V13. The heat from V13 transferred to that the DRIVE potentiometer was substantial. The original Valiant had Bakelite knobs that did not transfer heat to the fingers. On the Valiant II, the knobs were aluminum, and that knob became too hot to touch. Johnson supplied a replacement knob that was drilled out and with a cardboard tube installed to isolate the knob from the heat of the potentiometer shaft. That was only partially successful – the knob still became a bit too warm.
3. Hey, ever bought a radio from me? My call letters are in there, somewhere!
4. As it turns out, my friend, Gary Drasch, K9DJT, author of Ham Radio is Alive and Well (see Amazon for the book), used the same receiver and transmitter when he was a young ham. We both had the Johnson Viking Valiant Transmitter and the Hammarlund HQ-170 Receiver.

W9MXQ

The entire article is available on-line, see
http://www.gars.org/newsletters/2022_07_GARZETTE.pdf



The

GARS Membership

New Members List in June

Chris Bailey (KQ4AZV)
Garrison Daniel (KO4FPH)
Tyler Jensen (WB4TLJ)
Sahan Thanthiriwatte (KQ4BKE)
Chamali Thanthiriwatte
Isitha Thanthiriwatte (KQ4BKD)

New Members: 6

**Total Members as of
July 1, 2022
359**

Join GARS members for our weekly
breakfast gathering at
7:30 AM most Saturdays
Now at
Cracker Barrel Restaurant
75 Celebration Dr.
Suwanee, GA 30024

Birthdays in July

Tom Abernathy (W3BBQ)
Charles Bailey (KE4TPH)
Mary Ann Bazain
Becky Bentley (KK4SWI)
Kevin Biddle
James Boyd (KB9VTM)
Charlie Broome (WD4CCZ)
Bill Cherepy (WB4WTN)
Bill Cohl (WB2PIH)
Laurel Dickenson (KM4FMP)
Juan Dominguez
Randy Drescher Jr (K4HS)
Diane Gibson (N3MAD)
Ruth Grimes
Emilee Guidry
Jon Guidry (K5JDG)
Bob Hoffmann (K4CQO)
Frank Hummel (KO4MRQ)
Alan Janssen (KO4YPS)
Terry Jones (W4TL)
Brian Jones (KD4UYP)
Cathy Kelley (KN4DML)
Paul Kelley (W4KLY)
Sherwin Levinson (K4SML)
Charlotte Matchette (KE4OSR)
Audrey Mc Elroy (KM4BUN)
Rob Osattin (KI4UTY)
Larry Osborne (WT4XX)
Bill Pierce (K1LP)
Glenda Sandidge
Stephen Schreiman (KJ4MWF)
Sid Weaver (N4NQ)
Don Woodward (KD4APP)
Randy Woolery (KK4CRL)

GARS MEMBERSHIP

Your current GARS membership status is shown in the monthly newsletter e-mail towards the bottom of the message. To become a GARS member, or to renew your GARS membership, please visit our website – <http://www.gars.org>. To make changes to your GARS membership (moved, new e-mail address, new phone number, etc.), please e-mail your changes to the Membership Committee - membership@gars.org.

Membership Chair: Karen Albritton, KI4HPP
Committee Members: Dave Bruse, W4DTR

ARRL MEMBERSHIP

To update your ARRL membership information, please visit their website - <http://www.arrl.org>.

MAINTAIN YOUR LICENSE

You can update your Amateur Radio license information with the FCC at their website for free - <https://www.fcc.gov/wireless/universal-licensing-system>. License renewal is subject to the \$35 FCC fee.

Donating to GARS

Your GARS donation can be used for a certain purpose by donating to one of these funds:

- GARS SK Memorial Fund for Education (to remember and honor Silent Keys);
- GARS Scholarship Fund (Administered by the ARRL for awarding scholarships);
- GARS General Fund (any club purpose).

GARS has joined these rewards programs (a portion of every purchase you make through these merchants may be donated to GARS):

- Amazon Smiles;
- Kroger Community Rewards program.

For more information on how to sign up for these rewards programs, or to donate to GARS, visit

<http://gars.org/gars/donations-to-the-club>

GARS on Social Media



Discord Request:

<http://gars.org/discord>



Groups.io:

<http://gars.org/groups.io>



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Lawrenceville, GA 30049

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Glen Wendt, TechFest Chair W3WWT



Bob Hoffmann, GARzette Editor K4CQO



Eddie Foust, Repeater Chair WD4JEM



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Open Georgia QSO Chair

Open Workshop Leader

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Kyle Albritton, W4KDA



Bill Cherepy, WB4WTN W4GR Trustee



The

GARS Meeting Minutes

Gwinnett Amateur Radio Society – MEETING MINUTES

6/14/2022

In person and online meeting.

Vice President Jamie Burns (KX4HA) Opened the meeting at 7:00pm and closed the meeting at approximately 8:30pm

Membership: Jamie Reported 357 members

Workshop: Dallas (N4DDM)

- The June workshop will be dedicated to last minute Field Day prep.
- No Zoom meeting this month.

Field Day: David (KA4KKF)

- Sign up on the site if you are going to be at the Saturday evening meal.
- We will have 4 ssb stations, 3 digital stations, and 1 CW station.
- Steve (WB2OGY) will be safety officer. Let him know if you can assist.
- Saturday dinner will be at 7:00 p.m..
- Ice cream will be at 10 – 10:30 p.m..
- Ruth will attempt a satellite contact.
- Band captains should bring tarps.
- 6" PVC segments (at least a foot long) are needed to make common mode chokes during the antenna setup.

Other:

- This Saturday is the PDK airshow. Free but for parking.
- Also this Saturday is the Alford Memorial swap meet off of LaVista.
- Sandy Jackson, KJ4DRO provided the ice cream that everyone enjoyed.

Special Presentation: John Talipsky Jr. N3ACK, President of the Atlanta Radio Club presented awards to GARS as Georgia Club of the Year and to Ralph (KJ4CNC) as Educator of the Year. Ralph thanked GARS for the financial help, and all who have assisted with the ham cram and school events.

Minutes prepared by club secretary Bill Hawkins (WR1TR).

Workshop Minutes - June 21, 2022

Number in Attendance: 9

Workshop Topic: Field Day Preparations

Presenter: David Adcock KA4KKF - Field Day Chairman

Brief Summary: The focus of this Workshop was to get the laptops configured with N3FJP Field Day logging software and have the laptops talk to the contest server that tallies all of the contacts from the 8 stations. Then we switch focus to make sure the Station Captains had all the gear they needed.

Bob K4CQO and Mark KN2TOD worked on their DMR Field Day education presentation.

Dave W4DTR and Edina KN4LQA worked on APRS.

Events – GARS and others

ARRL CONTESTING INFO

From ARRL Contest Calendar
> For more information click the links <

2022	2023	January
1	1	Straight Key Night
1	7	Kid's Day
8-9	7-8	RTTY Roundup
15-17	21-23	January VHF Contest
		February
14-18	13-17	School Club Roundup
19-20	18-19	International DX – CW
		March
5-6	4-5	DX Contest -- SSB
		April
10	16	Rookie Roundup – Phone
		May
		No planned contests
		June
4-5	3-4	International Digital Contest
11-13	10-12	June VHF
18	17	Kid's Day
15-26	24-25	Field Day
		July
9-10	8-9	IARU HF World Championship
		August
6-7	5-6	222 MHz and Up Distance Contest
21-22	19-20	10 GHz & Up – Round 1
21	20	Rookie Roundup – RTTY
		September
10-12	9-11	September VHF
17-18	16-17	EME - 2.3 GHz & Up – Round 2
17-18	TBA	10 GHz & Up – Wknd 1
		October
15-16	TBA	EME - 50 to 1296 MHz – Wknd 2
17-21	16-20	School Club Roundup
		November
5-7	4-6	Nov. Sweepstakes - CW
12-13	TBA	EME - 50 to 1296 MHz
19-21	18-20	Nov. Sweepstakes - Phone
		December
2-4	1-3	160 Meter
10-11	9-10	10 Meter
18	17	Rookie Roundup–CW

For more information:
<http://www.arrl.org/contest-calendar>

HAMFEST CALENDAR

[Please confirm the status of a Hamfest before making plans to attend]

07/09/2022 - K4KDI Summer Tailgate

Location: Orlando, FL

Type: ARRL Hamfest

Sponsor: South Conway Baptist Church

08/13/2022 - Fort Pierce Hamfest

Location: Fort Pierce, FL

Type:

Sponsor: Fort Pierce Amateur Radio Club

Website: <https://FPARC.ORG>

08/20/2022 - 08/21/2022 Huntsville Hamfest, ARRL SE Division Convention

Location: Huntsville, AL

Type: ARRL Convention

Sponsor: Huntsville Hamfest, Inc.

Website: <http://hamfest.org>

08/20/2022 - TARCfest

Location: Tampa, FL

Type:

Sponsor: Tampa Amateur Radio Club

Website: <http://www.hamclub.org>

09/10/2022 - Gadsden Amateur Radio Hamfest

Location: Attalla, AL

Type: ARRL Hamfest

Sponsor: Gadsden Amateur Radio Club

09/10/2022 - Prater's Mill Swapfest

Location: Dalton, GA

Type: ARRL Hamfest

Sponsor: Dalton Amateur Radio Club

Website: <https://www.facebook.com/groups/499173303579789/>

10/07/2022 - 10/08/2022 Melbourne Hamfest, ARRL Florida State Convention

Location: Melbourne, FL

Type: ARRL Convention

Sponsor: Platinum Coast Amateur Radio Society(PCARS)

Website: <http://pcars.org>

10/15/2022 - 2nd Annual Manatee Amateur Radio Club Swapfest

Location: Bradenton, FL

Type: ARRL Hamfest

Sponsor: Manatee Amateur Radio Club, Inc.

Website: <https://www.manatee-arc.org/>

10/15/2022 - Annual North Okaloosa Amateur Radio Club Hamfest

Location: Crestview, FL

Type: ARRL Hamfest

Sponsor: NOARC returns for yet another great show!

Website: <https://w4aaz.org/noarc-hamfest/>

10/15/2022 - Flamingo Net Flea at U. of Miami

Location: Coral Gables, FL

Type: ARRL Hamfest

Sponsor: Flamingo Net ARC

Website: <http://www.FlamigoNet.8m.net>

For more information: <http://www.arrl.org/hamfests-and-conventions-calendar>

When searching by division, remember some states adjacent to GA are in different divisions:

Southeastern: GA, AL, FL Delta: TN Roanoke: NC, SC



The

GARS Events Calendar for 2022		GARS Recurring Calendar
TechFest Winter Field Day Spring Technician HamCram Dog Show Fundraiser Georgia QSO Party North metro area Fox Hunt Memorial Day Parade ARC/KARC Hamfest Field Day Summer General HamCram JOTA Fall Technician HamCram Maker Faire Stone Mt. Hamfest Holiday Party	Cancelled for 2022 Jan 29-30 2022 March 26-27, 2022 March 30-April 3 2022 April 9-10 2022 April 2022 May 30 2022 June 4 2022 June 26-27 2022 July 2022 October 16-17 2022 October 2022 TBD November 6-7 2022 December 14 2022	<ul style="list-style-type: none"> 2nd Tuesday of the month at 7 pm (except December) Monthly Club Meeting 690 Airport Rd, Lawrenceville, GA 30046 3rd Tuesday of the month at 7 pm (except December) Monthly Workshop 690 Airport Rd, Lawrenceville, GA 30046 2nd Sunday of the Month at 2 pm GARS Ham Exam Session 690 Airport Rd Lawrenceville, GA 30046 Every Monday at 7:30 pm: GARS Want, Swap, Sell, and Information Net on the GARS 147.075 MHz repeater Every Monday at 8:30 pm: ARES Training on the GARS 147.075 MHz repeater Most Saturdays at 7:30 am : GARS Weekly Breakfast Cracker Barrel Restaurant 75 Celebration Dr., Suwanee, GA 30024

GARS CALENDAR FOR July 2022

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
					1	2 Breakfast at Cracker Barrel in Suwanee 7:30 AM
3	4 7:30 – 8:00 PM GARS 2M Net	5 7:00 PM GARS Exec Meeting (Online)	6	7	8	9 Breakfast at Cracker Barrel in Suwanee 7:30 AM
10 GARS VE Exam Session EAA 690 Hangar 2:00 PM	11 7:30 – 8:00 PM GARS 2M Net	12 7:00 PM GARS Meeting EAA 690 Hangar	13	14	15	16 Breakfast at Cracker Barrel in Suwanee 7:30 AM
17	18 7:30 – 8:00 PM GARS 2M Net	19 7:00 PM GARS Workshop EAA 690 Hangar	20	21	22	23 Breakfast at Cracker Barrel in Suwanee 7:30 AM
24	25 7:30 – 8:00 PM GARS 2M Net	26	27	28	29	30
31						

Local Ham Radio Exams & Meetings

GARS Ham Radio Exams

Second Sunday of the month

Doors open at 1:45pm, exams start promptly by 2:00pm

GARS VE-Team

VEC: W5YI-VEC

EAA 690 Hangar

690 Airport Rd

Lawrenceville, GA 30046

GARS VE Team Leaders

E-mail: exams@gars.org

June 2022 Results

We had another good test session on Sunday, 06/12/2022. We had eight individuals sit for exams and seven were successful as follows:

- 7 New Technician Class.

Many thanks to the following VE's who made this session possible:

- Frank, KV4SP
- Bill, WB4WTN
- Dave, K8WDJ
- Steve, WB2OGY
- Dave, W4DTR (CVE)
- Bob, K4CQO
- Jamie, KX4HA
- Earl, AF4FG

73, Don, KK4NJM (Co-CVE) GARS VE Website: <http://gars.org/exams> has location information and testing requirements.

Local Ham Radio Exams

In order to find an exam session near you, please visit http://www.arrl.org/exam_sessions/. Contact the information in the listing for further information.



Local Ham Radio Meetings

In order to find a local Ham Radio Club meeting near you, please visit <http://www.arrl.org/find-a-club>. Contact the club for meeting information.





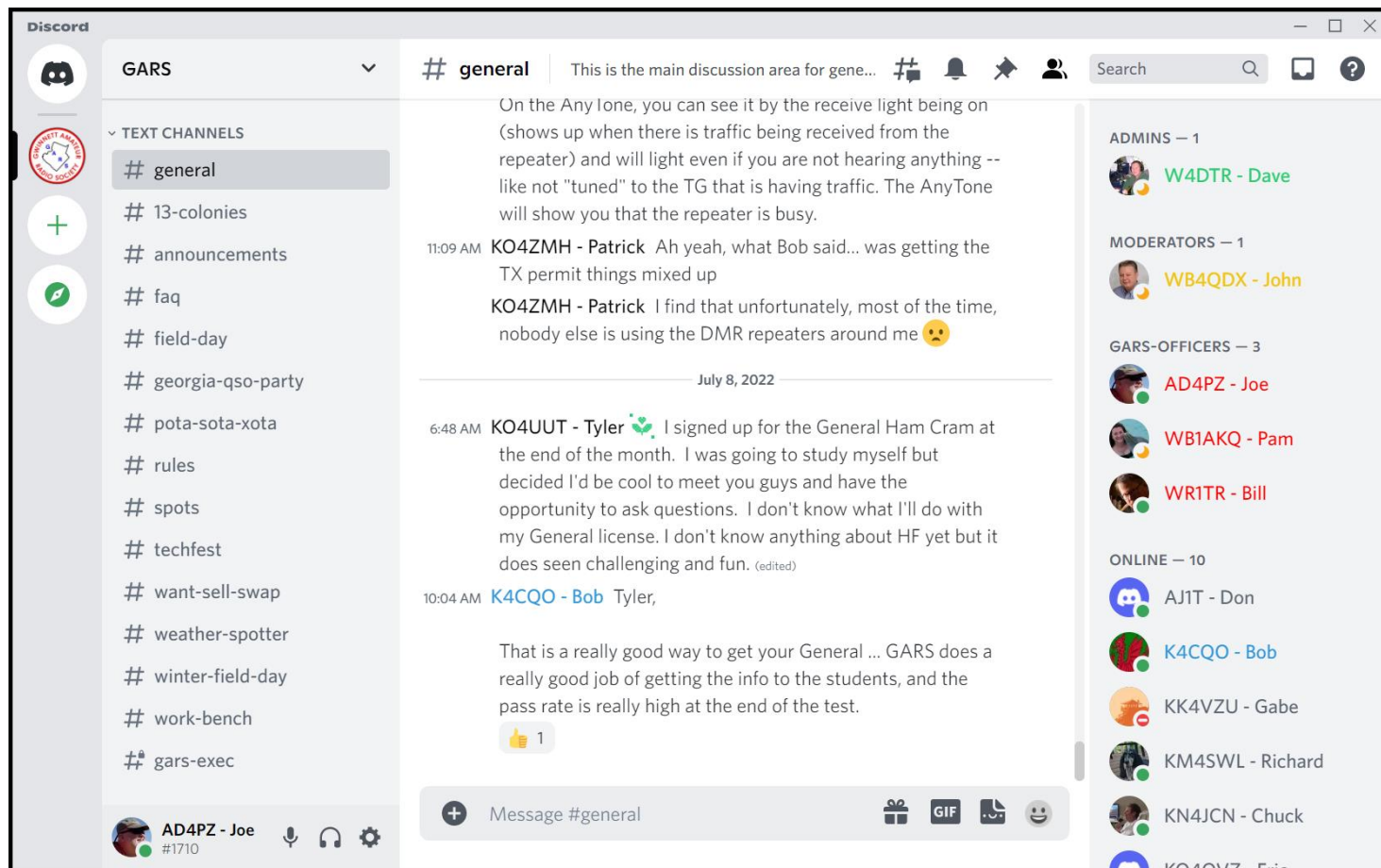
The

GARzette

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Don't forget about our Discord utility for GARS announcements, news, activity spotting and more.

See <http://www.gars.org> left side menu. Below is a sample of Discord.



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Email: atlanta@hamradio.com

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The

GARzette



FREE ADMISSION



TechFest

Gwinnett Amateur Radio Society

★ ★ ★ **TECHFEST 2023** ★ ★ ★

SATURDAY, JANUARY 14, 2023

EXHIBITORS: SET UP 7:30AM – 9:00AM

PUBLIC: 9:00AM – 2:00PM

HAM EXAMS: 9:00AM – 11:00AM

FINAL PRIZE DRAWING: 2:00PM

-FORUMS-

-EXHIBITORS-

-RAFFLE PRIZES-

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-FREE STUFF-

-CHILI CONTEST-



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